

APPLICANT(S): MERON, Gavriel et al.  
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### AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel and withdraw without prejudice or disclaimer to resubmission in a divisional or continuation application claims 38 and 42, indicated as cancelled:

1. (Currently Amended) A method comprising:  
inserting a first in-vivo device into a gastrointestinal tract, the first in-vivo device including at least an imaging device ~~a sensing device to sense selected parameters of the gastrointestinal tract;~~  
~~receiving sensing signals corresponding to~~ image data received by the sensing from the imaging device, ~~the sensing signals corresponding to selected parameters of the gastrointestinal tract;~~  
generating a map from at least the ~~sensing signals~~ image data;  
inserting a second in-vivo device into the gastrointestinal tract; and  
determining the location of the second in-vivo device relative to the map.
2. (Currently Amended) The method according to claim 1, wherein the ~~sensing~~ imaging device is to generate data, and wherein the first in-vivo device is a capsule comprising:  
means for signal analysis of ~~the data generated in the~~ a first pass and the a second pass;  
and  
means for controlling the second in-vivo device according to said signal analysis; and  
means for performing a job in the gastrointestinal tract.
3. (Previously Presented) The method according to claim 1, wherein the step of generating a map of the gastrointestinal tract comprises the steps of:  
inserting the first in-vivo device into the gastrointestinal tract;  
locating said first in-vivo device; and  
displaying the location on a position monitor.
4. (Previously Presented) The method according to claim 3, further comprising a step of displaying the location of the first in-vivo device two or three dimensionally.

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5. (Previously Presented) The method according to claim 4, wherein the location of the first in-vivo device is displayed as an overlay to a schematic presentation of the gastrointestinal tract.
6. (Previously Presented) The method according to claim 1, wherein the step of inserting a first in-vivo device comprises inserting the first in-vivo device in a first pass, and wherein the step of inserting a second in-vivo device comprises the steps of:  
inserting the second in-vivo device into the gastrointestinal tract in a second pass;  
receiving data from said second in-vivo device;  
performing signal analysis of the data generated in the first pass and of the data generated in the second pass; and  
controlling said second in-vivo device according to said signal analysis.
7. (Previously Presented) The method according to claim 1, wherein the step of inserting the first in-vivo devices comprises inserting the first in-vivo device in a first pass, wherein the step of inserting the second in-vivo device comprises inserting the second in-vivo device in a second pass, and wherein the first pass and the second pass are one or more passes.
8. (Previously Presented) The method according to claim 1, wherein the location is a location of a pathology.
9. (Currently Amended) An imaging sensing and utility device for performing a job at a target location in a gastrointestinal tract, the device comprising:  
~~sensing~~ imaging means for ~~sensing~~ imaging ~~selected parameters of~~ the gastrointestinal tract and for generating image data in a first pass and a second pass through the gastrointestinal tract;  
means for signal analysis of the image data generated in the first and second pass;  
means for generating a map from at least the image data generated on the first pass ~~selected parameters~~;  
means for performing a job in the gastrointestinal tract; and

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means for controlling the imaging sensing and utility device and controlling the means for performing a job, operable according to said signal analysis.

10. (Currently Amended) The device according to claim 9 wherein the sensing imaging means sense image ~~parameters~~ of the gastrointestinal tract in a first and second pass and wherein the means for signal analysis analyze the image data ~~sensed parameters~~.
11. (Currently Amended) The device according to claim 10 wherein the means for controlling the sensing imaging and utility device are operable according to the analysis of the image data ~~sensed parameters~~ in the first and second pass.
12. (Previously Presented) The device according to claim 9 wherein the means for performing a job in the gastrointestinal tract are selected from means for releasing substances into the gastrointestinal tract and means for collecting substances from the gastrointestinal tract.
13. (Currently Amended) A system for delivering an imaging sensing and utility device to a target location in the gastrointestinal tract, the system comprising:  
[[a sensing]] an imaging and utility device comprising:
  - a camera system;
  - an optical system to sense image an area of interest of the gastrointestinal tract onto said camera system;
  - a transmitter to transmit video output of said camera system; and
  - a reception system which receives said transmitted video output, said reception system comprising:
    - an antenna array capable of surrounding a body and comprising a plurality of antennas for receiving said transmitted video output and for producing a plurality of received signals;
    - a demodulator capable of transforming said plurality of received video signals into a single video data stream; and

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a data processing system to generate tracking and video data and a map from video data; and

an analyzing unit for signal analysis of said video output and for controlling the ~~sensing-imaging~~ and utility device in relation to said map.

14. (Currently Amended) The system according to claim 13 wherein the ~~sensing-imaging~~ and utility device is swallowable.
15. (Currently Amended) The system according to claim 13 wherein the ~~sensing-imaging~~ and utility device is placeable in the gastrointestinal tract.
16. (Withdrawn) A storage compartment, enclosed in a sensing and utility device, for releasing and collecting substances to and from the gastrointestinal tract, having an inflexible barrier as a first wall, and said device shell as a second wall, said second wall opposing said first wall, and comprising:  
a flexible pouch for retaining said substances, said pouch encased within said inflexible barrier and device shell;  
a bi stable spring attached to the inflexible barrier, at one end, and to the flexible pouch at another end, for controlling the pouch bulk; and  
means for changing the bi stable spring configuration, for extending the spring to decrease pouch bulk and for recoiling the spring to increase pouch bulk.
17. (Withdrawn) The storage compartment according to claim 16 further comprising a firm diaphragm, having elasticity which enables it to accommodate to a device shape, and which is horizontally movable between the inflexible barrier and device shell, said diaphragm situated at the attachment site of the bi stable spring and the flexible pouch, and attached to both flexible pouch and bi stable spring, for pushing or pulling the flexible pouch relatively to the compartment walls.
18. (Withdrawn) The storage compartment according to claim 17 further comprising means for rupturing the flexible pouch for releasing a substance from said pouch to a

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patient's gastrointestinal tract and for collecting into said pouch substances from a patient's gastrointestinal tract.

19. (Withdrawn) The storage compartment according to claim 18 wherein the device shell contains an area which is permeable to the released and collected substance.
20. (Withdrawn) The storage compartment according to claim 19 wherein the means for rupturing the flexible pouch is a pin, said pin being attached to a first pouch wall while protruding in the direction of a second pouch wall, said second pouch wall being opposed to said first pouch wall,  
and wherein the pin is thrust into the second pouch wall to rupture it for releasing a substance from the pouch.
21. (Withdrawn) The storage compartment according to claim 19 wherein the means for rupturing the flexible pouch is a pin, said pin being attached to a first pouch wall while being lodged in a second pouch wall, said second pouch wall being opposed to first pouch wall,  
and wherein, for collecting a substance into the pouch, the pin is dislodged from the second pouch wall and moved in the direction of the first pouch wall, rupturing said second pouch wall.
22. (Withdrawn) The storage compartment according to claims 20 and 21 further comprising a space between the second pouch wall and the device shell for containing a pin tip protruding through the second pouch wall, for protecting a patient's gastrointestinal tract from the protruding pin tip.
23. (Canceled)
24. (Presently Amended) A method of delivering a device to a target location in an in-vivo lumen, the method comprising:

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during a first pass, passing a first device through a lumen and generating a map of the lumen from image data ~~related to selected parameters~~ of the lumen sensed imaged from the lumen and received from the first device; and  
during a second pass, collecting data from a second device and delivering said second device to a target location identified on said map.

25. (Previously Presented) The method of claim 24, comprising passing the first device through a gastrointestinal tract.
26. (Previously Presented) The method of claim 24, wherein passing the first device and passing the second device each comprise passing the same device.
27. (Previously Presented) The method of claim 24, wherein passing the first device and passing the second device each comprise passing different devices.
28. (Previously Presented) The method of claim 24, wherein passing the first device comprises passing a first device which includes a sensor, and wherein passing the second device comprises passing a second device which includes a sensor.
29. (Previously Presented) The method of claim 24, wherein passing the first device comprises passing a first device which includes an imager, and wherein passing the second device comprises passing a second device which includes an imager.
30. (Previously Presented) The method according to claim 24, wherein at least passing the second device comprises passing a second device which includes an operational device for performing a job.
31. (Previously Presented) The method of claim 30, wherein passing the second device which includes the operational device for performing a job comprises passing a second device which includes a sampling device.

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32. (Previously Presented) The method of claim 30, wherein passing the second device which includes the operational device for performing a job comprises passing a second device which includes a dispensing device.
33. (Previously Presented) The method of claim 24, comprising:  
performing a signal analysis of the data generated in the first pass and the second pass;  
and  
controlling the second device according to said signal analysis.
34. (Previously Presented) The method according to claim 24, wherein the step of generating a map of the lumen comprises collecting location data from the first device.
35. (Previously Presented) The method of claim 24, comprising performing a comparison of the data collected on the first pass and the data collected on the second pass.
36. (Previously Presented) The method of claim 35, comprising controlling said second device according to said comparison.
37. (Currently Amended) A method for delivering a device to an in-vivo location, the method comprising:  
receiving data related to image data ~~selected parameters sensed~~ imaged from the in-vivo location from an in-vivo device;  
comparing said data to a map of an in-vivo lumen, the map generated from image data ~~parameters sensed~~ from the in-vivo lumen; and  
determining when a portion of said received data matches a portion of the map corresponding to the in-vivo location.
38. (Cancelled)
39. (Previously Presented) The method of claim 37, comprising, when a match is determined, causing the device to perform a job.

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40. (Previously Presented) The method of claim 37, wherein said data is gathered by an in-vivo imager.
41. (Currently Amended) A system for delivering a device to an in-vivo location, the system comprising:  
a processor capable of:  
receiving image data ~~related to selected parameters~~ of the in-vivo location from an in-vivo device;  
comparing said data to a map of an in-vivo lumen, the map generated from ~~parameters~~ sensed image data from an in-vivo lumen; and  
determining when a portion of said received data matches a portion of the map.
42. (Cancelled)
43. (Previously Presented) The system of claim 41, wherein said processor is capable of, when a match is determined, causing the device to perform a job.
44. (Previously Presented) The system of claim 41, wherein said data is gathered by an in-vivo imager.
45. (Previously Presented) The system of claim 41, comprising a plurality of antennas.
46. (Previously Presented) The system of claim 41, wherein said processor is capable of producing a map from tracking data received from an in-vivo device.
47. (Previously Presented) The system of claim 41, wherein the in-vivo lumen is a gastrointestinal tract.
48. (Withdrawn) An in-vivo device comprising:  
an external shell; and



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a storage compartment including an inflexible barrier forming a first wall, and wherein said external shell forms a second wall of the compartment, said second wall opposing said first wall, said compartment including:

a flexible pouch encased within said inflexible barrier and device shell; and  
a bi stable spring attached to the inflexible barrier and attached to the flexible pouch.

49. (Withdrawn) The device of claim 48 including extension means for extending the spring to decrease pouch bulk and for recoiling the spring to increase pouch bulk.
50. (Withdrawn) The device of claim 48 comprising a firm diaphragm horizontally movable between the inflexible barrier and the device shell, said diaphragm disposed at the attachment site of the bi stable spring and the flexible pouch, and attached to both the flexible pouch and the bi stable spring.
51. (Withdrawn) The device of claim 48 comprising a sharp piercing unit.
52. (Withdrawn) The device of claim 48 comprising means for collecting into said pouch substances from a patient's lumen.
53. (Withdrawn) The device of claim 48 wherein the device shell includes a permeable area.